REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed September 10, 2008. In the Office Action, claims 1, 2, 4, 5, 7 and 9 were preliminarily rejected as allegedly being anticipated under 35 USC §102(b). In addition, claims 1, 2, 3, 6, 8 and 9 were preliminarily rejected as allegedly being unpatentable under 35 USC §103(a). Further, claim 9 was objected to under 37 CFR 1.75(c) as failing to limit the subject matter of a previous claim. Claims 9 also was alleged to fail to further limit the subject of claim 1.

In response, claims 1 and 9 have been amended and claims 10-15 have been newly added, without introducing new matter. Claims 1-15 remain pending in the present application.

I. OBJECTION TO CLAIM 9

In the Office Action, claim 9 has been objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. In response, claim 9 has been amended to be an independent claim focused on the membrane. Review and allowance of claim 9 is respectfully requested.

II. RESPONSE TO CLAIM REJECTION UNDER 35 USC §102

In the Office Action, claims 1, 2, 4, 5, 7 and 9 were preliminarily rejected under 35 USC §102(b) as allegedly being anticipated by US Patent No. 4,881,617 to Faraone (hereafter, "Faraone"). For a proper rejection of a claim under 35 U.S.C. §102(b), the cited reference must disclose all elements/features/steps of the claim. See, *e.g.*, E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

A. **Claim 1**

Amended independent claim 1 reads:

> 1. A loudspeaker provided with a frame (1), a membrane (3) and a drive unit (5), **the membrane having a substantially flat outer circumferential edge** suspended from the frame, **and a substantially flat inner circumferential edge**, the drive unit having a stationary part secured to the frame and provided with a magnet system, and a translatable part provided with a coil support secured to the substantially flat inner circumferential edge of the membrane and comprising an electric coil, wherein the membrane includes a membrane body (4), which, viewed in a circumferential direction, has a pattern of folds (4C) radially extending between the substantially flat inner circumferential edge and the substantially flat outer circumferential edge of the membrane **and, viewed from the drive unit, has a ring-shaped recess**.
>
> (**Emphasis Added**)

The Applicant respectfully submits that Faraone does not teach all elements of amended independent claim 1. Specifically, in amending independent claim 1, the limitation of the membrane body being provided with a ring-shaped recess was added, which is not taught by Faraone. As described in the presently pending application, the ring-shaped recess is used to enlarge the stroke of the translatable part of the drive unit. This is provided to enhance the speaker performance, and particularly to alleviate problems that arise in shallow speakers.

Difficulties associated with shallow speakers are described on page 1, lines 15-21 of the presently pending application, which explain that the speaker is required to have a certain minial stiffness in order to move like a piston for low-frequency reproduction and to have a controlled behavior at and above the first break-up of the membrane for mid and high-frequency reproduction. Such characteristics are difficult to achieve with speakers having a small height.

The Applicant respectfully submits that the membranes in Faraone do not include a ring shaped recess, when viewed from the drive unit. As discussed above, the presence of a ring shaped recess allows the stroke of the translatable part of the drive unit to be enlarged which may enhance the speaker performance.

In addition to the abovementioned, Faraone does not teach a membrane that is provided with both a substantially flat outer circumferential edge and a substantially flat inner circumferential edge. In contrast, it can be seen from Figure 5 in Faraone that the membranes disclosed therein have undulating edges. As discussed on page 2, lines 1 to 3 of the presently pending application, difficulties arise during the manufacture of loudspeakers from membranes that have undulating edges. In particular, it is difficult to fix a corrugated membrane to a voice coil bobbin.

In summary, Faraone does not teach all elements of amended independent claim 1 and allowance of independent claim 1 is respectfully requested.

B. Claims 2, 4, 5, and 7

Since independent claim 1 is allowable over the prior art of record, its dependent claims 2, 4, 5, and 7 are allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Additionally and notwithstanding the foregoing, these dependent claims recite further features and/or combinations of features (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record. Hence, there are other reasons why these dependent claims are allowable.

III. RESPONSE TO CLAIM REJECTIONS BASED ON OBVIOUSNESS

In the Office Action claims 1, 2, 3, 6, 8, and 9 were preliminarily rejected under 35 USC §103(a) as allegedly being unpatentable over US Patent No. 2,960,177 to Haerther, Jr. (hereafter, "Haerther"). It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., In re Dow Chemical, 5 U.S.P.Q. 2d 1529, 1531 (Fed. Cir. 1988), and In re Keller, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).

A. Claim 1

Amended independent claim 1 reads:

> 1. A loudspeaker provided with a frame (1), a membrane (3) and a drive unit (5), **the membrane having a substantially flat outer circumferential edge** suspended from the frame, **and a substantially flat inner circumferential edge**, the drive unit having a stationary part secured to the frame and provided with a magnet system, and a translatable part provided with a coil support secured to the substantially flat inner circumferential edge of the membrane and comprising an electric coil, wherein the membrane includes a membrane body (4), which, viewed in a circumferential direction, has a pattern of folds (4C) radially extending between the substantially flat inner circumferential edge and the substantially flat outer circumferential edge of the membrane **and, viewed from the drive unit, has a ring-shaped recess**.
>
> **(Emphasis Added)**

The Applicant respectfully submits that Haerther does not disclose, teach, or suggest all elements of amended independent claim 1. Specifically, in amending independent claim 1, the limitation of the membrane body being provided with a ring-shaped recess was added, which is not taught by Faraone. As described in the presently pending application, the ring-shaped recess is used to

enlarge the stroke of the translatable part of the drive unit. This is provided to enhance the speaker performance, and particularly to alleviate problems that arise in shallow speakers.

Difficulties associated with shallow speakers are described on page 1, lines 15-21 of the presently pending application, which explain that the speaker is required to have a certain minial stiffness in order to move like a piston for low-frequency reproduction and to have a controlled behavior at and above the first break-up of the membrane for mid and high-frequency reproduction. Such characteristics are difficult to achieve with speaker having a small height.

The Applicant respectfully submits that the membranes in Haerther do not include a ring shaped recess, when viewed from the drive unit. As discussed above, the presence of a ring shaped recess allows the stroke of the translatable part of the drive unit to be enlarged which may enhance the speaker performance.

In addition to the abovementioned, Haerther does not show a membrane that is provided with both a substantially flat outer circumferential edge and a substantially flat inner circumferential edge. In contrast, the outer edge of the membranes of Haerther are not substantially flat. Instead, it clear from Figure 2 that the outer edges of Haerther are undulating. As discussed on page 2, lines 1 to 3 of the presently pending application, difficulties arise during the manufacture of loudspeakers from membranes that have undulating edges. In particular, it is difficult to fix a corrugated membrane to a voice coil bobbin.

Further to the abovementioned, Haerther is also concerned with rectangular membranes, and as a result, the outer edges of the membranes in Haerther do not present a circumferential edge. In summary, Haerther does not disclose, teach, or suggest all elements of amended independent claim 1 and allowance of independent claim 1 is respectfully requested.

B. Claims 2, 3, 6, and 8

Since independent claim 1 is allowable over the prior art of record, its dependent claims 2, 3, 6, and 8 are allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Additionally and notwithstanding the foregoing, these dependent claims recite further features and/or combinations of features (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record. Hence, there are other reasons why these dependent claims are allowable.

IV. Prior Art Made Of Record

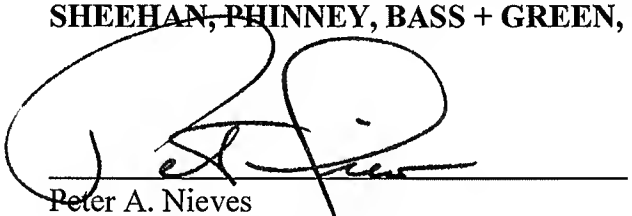
The Applicant has considered the prior art made of record and is not considered to be relevant to patentability of the invention.

CONCLUSION

In light of the foregoing and for at least the reasons set forth above, the Applicant respectfully requests favorable reconsideration and allowance of the present application and the presently pending claims. If in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (603) 627-8134.

Respectfully submitted,

SHEEHAN, PHINNEY, BASS + GREEN, P.A.



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